

REMARKS

In the Office Action dated 21 August 2003, claims 13-29, all claims pending in the above captioned U.S. Patent Application were rejected. Applicants have carefully considered the Office Action and submit the amendments preceding and these remarks as a full and complete response.

Applicants have amended the claims as suggested by the Examiner and have amended the claims additionally to recite that polyamides (PA) of the invention are modified from the commercial polyamides to have abnormal ratios of terminal amino groups and terminal carboxyl groups. The basic polyamide backbone structure and numbering system are used to identify the closest analogues. The Examiner's attention is directed to page seven of the specification for support and further explanation.

At page three of the Office Action, a rejection has been made of claims 19 and 29 under 35 USC 112, second paragraph. It has been asserted that those claims contain an improper Markush group. Applicants respectfully disagree. The recited additives are standard components added to structural polymers to modify the properties of the final product. The attached copy of Modern Plastics Encyclopaedia indicates that the recited elements were regularly grouped together more than 30 years ago. This is because they share the common utility of modifiers and they are grouped together because they have similar effects in most thermoplastic materials and are routinely adjusted as needed, much as spices in a kitchen are used. The rejection fails.

Claims 13-18 and 20-28 have been rejected over the combination of Yamamoto et al., (USP# 4,593,974) in view of Yang et al, (USP#6,064,790). Yamamoto et al. teaches a plastic optical fibre having a core (6) formed on polymethyl methacrylate and/or polystyrene and derivatives thereof, a cladding (7) which includes fluoroalkyl acrylates and methacrylates and outer protective layer (8) which is the same as the core.

Yang et al. (Fig. 1) teaches an optical fibre (12) formed of an "optical fibre" of unspecified composition, a primary layer (14) formed from a UV-curable acrylate, a secondary layer (16) formed from a different (tougher) acrylate and an outer coating layer (18) formed from a commercial polyamide.

The problem solved by Applicants invention is described beginning at page 1 line 26. While connectors for optical fibre buried underground or run in buildings are not subjected to large temperature variations or vibrations, when optical fibres are used in automobiles, busses and aircraft "pistoning" becomes a problem because the layers of the fibre and the connectors are expanding and contracting at different rates. U.S. Patents numbers 6,007,258 and 6,074,100 illustrate recent attempts to resolve this problem.

Applicants have found that modified polyamides have greatly improved adherence to the fluoride-containing cladding layers. This improved adhesion results from changing the ratio of terminal amine and terminal carboxyl groups on the polyamide. Most particularly, the improvement results from an amino terminal group excess which is obtained by the process described at page seven, first paragraph. The improvement is described at paragraphs 29-31 of the application. The sheath of L16A is compared to Grilamid L16LM (a product of the assignee of this invention) and superior adhesion is shown by the increased force needed to strip the wave guide.

Yang et al. uses the same Grilamid L16LM as used in applicants' comparisons (c.f. Yang et al. at col. 4, lines 12-16 and 29-31). Clearly, Yang et al. do not recognize that the properties of the PA can be improved by modification of its terminal amino groups, especially when used in high stress applications.

The Dalla Torre et al. reference is not discussed because it relates only to additives used in flame retardant textiles and is not relevant to the allowability of the broad claims.

A copy of EP 1 171 786 B1 is enclosed. This is the European equivalent of this application.

In view of the amendments and remarks above, applicants submit that this application is in allowance and request reconsideration and expeditious passage to issue.

Respectfully submitted,

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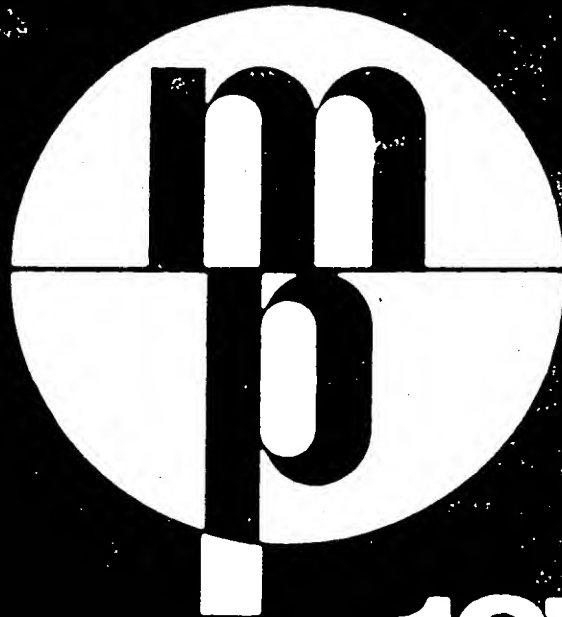
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Enclosure: Copy of Modern Plastics Encyclopedia Vol. 48, No. 10A, 1971
EP 1 171 786 B1

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